AMENDMENTS TO THE CLAIMS

1-98 (Canceled)

99. (New) A composition comprising:

a substrate;

an array of nanostructured silicon columns defining a three-dimensional surface and an interface with a void volume, said array of nanostructured silicon columns extending from said surface, each of said array of nanostructured silicon columns having a width of between 20 and 30 nanometers;

a plurality of metallic nanocrystals spaced uniformly between columns of said array of nanostructured silicon columns.

100. (New) The composition of claim 99 wherein said substrate is planar glass.

101. (New) The composition of claim 99 wherein said array of nanostructured silicon columns have an average columnar separation of 20 nanometers.

102. (New) The composition of claim 99 wherein said array of nanostructured silicon columns has a height of less than 2000 Angstroms.

103. (New) The composition of claim 99 wherein the three-dimensional surface has an oxide layer underlying said plurality of metallic nanocrystals.

104. (New) The composition of claim 99 wherein said plurality of metallic nanocrystals are formed from the element of silver, gold, copper, iron, palladium, or platinum.

105. (New) The composition of claim 99 wherein one of said plurality of metallic nanocrystals bridges two spatially separated adjacent columns of said array of nanostructured silicon columns.

106. (New) The composition of claim 99 wherein said plurality of metallic nanocrystals are sized on the order of the wavelength of visible light and impart a bulk metallic reflectance to the composition.

107. (New) A composition comprising:

a substrate;

an array of nanostructured semiconductor columns defining a three-dimensional surface and an interface with a void volume and extending from said surface with an average separation between adjacent columns of said array of nanostructured semiconductor columns;

a plurality of metallic nanocrystals where a single nanocrystal of said plurality of metallic nanocrystals bridges two spatially separated adjacent columns of said array of nanostructured semiconductor columns.

108. (New) The composition of claim 107 wherein said array of nanostructured silicon columns have an average columnar separation of 20 nanometers.

109. (New) The composition of claim 107 wherein the three-dimensional surface has an oxide layer underlying said plurality of metallic nanocrystals.

110. (New) The composition of claim 107 wherein said plurality of metallic nanocrystals are formed from the element of silver, gold, copper, iron, palladium, or platinum.

111. (New) The composition of claim 107 wherein a portion of said plurality of metallic nanocrystals are sized on the order of the wavelength of visible light to impart a bulk metallic reflectance to the composition.

112. (New) A process for forming an array of nanostructured silicon columns uniformly covered with metallic nanocrystals comprising: contacting a substrate having the array of nanostructured silicon columns extending from said surface to a solution of metal cations for a period of time to reduce said metal ions to form a plurality of metallic nanocrystals spaced uniformly on the three-dimensional surface contacted by said solution independent of the introduction of a surfactant or a reducing agent.

113. (New) The process of claim 112 wherein said array of nanostructured silicon columns has an oxide coating on the three-dimensional surface during said contacting step.

114. (New) The process of claim 112 wherein extending said contacting step increases the number density of said plurality of metallic nanocrystals with an average particle size of said plurality of metallic nanocrystals remaining unchanged.

115. (New) The process of claim 112 wherein the time of said contacting step is sufficient to allow individual nanocrystals of said plurality of metallic nanocrystals to grow to simultaneously bridge two spatially separated adjacent columns of said array of nanostructured silicon columns.